

**COPY**  
*Not for Recordation*  
**ASSIGNMENT**

DAVE 148-001 APC  
US  
PATENT PC10567A

WHEREAS, I/WE

**Robert Gerard ANKENBAUER**

a United States citizen, residing at 104 Castle Hill Road, Pawcatuck, Connecticut, 06379, United States of America

**Everett Lee ROSEY**

a United States citizen, residing at 457 Route 164, Preston, Connecticut 06365, United States of America

hereinafter referred to as Assignor (collectively if more than one inventor is listed above), have invented certain new and useful improvements in **LAWSONIA DERIVED GENE AND RELATED SodC POLYPEPTIDES, PEPTIDES AND PROTEINS AND THEIR USES**, the specification of which:

- (a) ☐ was executed on even date herewith;
- (b) ☐ was filed on \_\_\_\_\_ as ☐ Application No 0/ \_\_\_\_\_  
or ☐ Express Mail No., as Application No. not yet known \_\_\_\_\_ and was amended on \_\_\_\_\_ (if applicable); or
- (c) ☒ was described and claimed in PCT International Application No **PCT/AU00/00436** filed on **11 May, 2000** and as amended under PCT Article 19 on \_\_\_\_\_ (if any) and/or under PCT Article 34 on \_\_\_\_\_ (if any).

AND WHEREAS, **PFIZER, INC.** with its principal place of business at 235 East 42<sup>nd</sup> Street, New York, New York, 10017, United States of America

(hereinafter referred to as Assignee) desires to acquire the entire rights, title, and interest in and to the said improvements with respect to the United States of America, its territories and possessions.

NOW, THEREFOR, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignor hereby acknowledges that it has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, the entire right, title, and interest in the United States of America, and its territories and possessions in, to and under said improvements, and any Patent Applications in the United States of America and all divisions, renewals and continuations thereof, and all Patents of the United States of America which may be granted thereon and all reissues and extensions thereof, and all rights of priority under International Conventions; and Assignor hereby authorizes and requests the Commissioner of Patents of the United States of America to issue all Patents for said improvements to Assignee, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND ASSIGNOR HEREBY covenants and agrees that it will communicate to Assignee, its successors, legal representatives and assigns, any facts known to it respecting said improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said improvements in the United States of America.

IN TESTIMONY WHEREOF, Assignor intending to be legally bound has hereunto affixed its signature.

This 16<sup>th</sup> day of April, 2001 2002

Robert G Ankenbauer  
Signature of **Robert Gerard ANKENBAUER**

This 18<sup>th</sup> day of April, 2001 2002

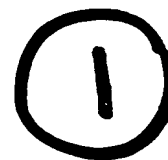
Everett Lee Rosey  
Signature of **Everett Lee ROSEY**

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Not for Recordation

PAU 148-001 APC

DEVOLUTION OF TITLE DOCUMENTS



ASSIGNMENT

BETWEEN:

The ASSIGNORS:(i) Michael PANACCIO, an Australian citizen,  
of: 122 Hill Road, North Balwyn, Victoria 3104, Australia; and  
  
(ii) Detlef HASSE, an Australian citizen,  
of: 4 Scullin Court, Sunbury, Victoria 3429, Australia;

AND

The ASSIGNEE: STATE OF VICTORIA as represented by its DEPARTMENT OF  
NATURAL RESOURCES AND ENVIRONMENT,  
of: 8 Nicholson Street, East Melbourne, Victoria 3002, Australia;

In respect of the inventions disclosed in the patent applications listed in the Schedule affixed hereto.

WHEREAS:

1. The ASSIGNORS are co-applicants in respect of the patent applications listed in the Schedule;
2. The ASSIGNEE was, at the time the invention was made, the employer of the Assignors; and the ASSIGNEE is desirous of acquiring an interest in, to and under said invention and any Letters Patent to be obtained therefor;
3. This Assignment Witnesses that, in consideration of ONE DOLLAR (\$1.00), the receipt of which is hereby acknowledged, the ASSIGNORS hereby sell, assign, transfer and set over to the ASSIGNEE the exclusive rights, titles and interests to have and to hold, use, exercise and enjoy said inventions and any and all Patent Applications which claim the benefit of priority from any or all of the Patent Applications listed in the Schedule, and any and all Letters Patent to be obtained on any and all of said Patent Applications, and any divisional application, continuation application, renewal, reissue or substitute thereof for the full term or terms for which the same may be granted;
4. The ASSIGNORS hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale;
5. The ASSIGNORS further covenant that the ASSIGNEE will, upon request, be provided promptly with all pertinent facts and documents relating to said applications, said inventions and said Letters Patent as may be known and accessible to the ASSIGNORS, and will testify as to the same in any interference or litigation related thereto, and will promptly execute and deliver to the ASSIGNEE or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain and enforce said applications, said inventions and said Letters Patent which may be necessary or desirable to carry out the purposes hereof at the cost of the ASSIGNEE or subsequent titleholder.

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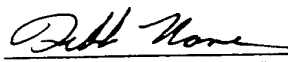
IN WITNESS WHEREOF, the parties hereto have hereunto executed this Assignment:


For and on behalf of the ASSIGNORS:

  
Name: Michael PANACCIO

Witness:   
Name: ~~Jim Parsons~~ Business Development Manager  
Title:

DATED this 11<sup>th</sup> DAY of October, 1999.

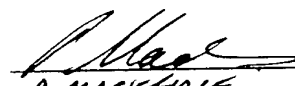
  
Name: Detlef HASSE

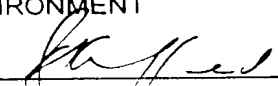
Witness:   
Name: Meri Smith  
Title: Senior Scientist

DATED this Fifth DAY of October, 1999.

For and on behalf of the ASSIGNEE:

STATE OF VICTORIA as represented by its  
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT  
by its authorized officer whose signature  
appears opposite hereto:

Witness:   
Name: P MACKENZIE  
Title: RPA

  
Name:  
Title: Executive Director  
Minister  
BRUCE KEPFORD  
Executive Director - Primary Industries

DATED this 17<sup>th</sup> DAY of NOVEMBER, 1999.

## DEVOLUTION OF TITLE DOCUMENTS

(2)

**COPY**  
*Not for Recordation* ASSIGNMENTBETWEEN:

The ASSIGNOR: STATE OF VICTORIA as represented by its DEPARTMENT OF  
NATURAL RESOURCES AND ENVIRONMENT,  
of: 8 Nicholson Street, East Melbourne, Victoria 3002, Australia;

## AND

The ASSIGNEES:(i) AGRICULTURE VICTORIA SERVICES PTY LTD,  
of: 475 Mickleham Road, Attwood, Victoria 3049, Australia; and  
(ii) PIG RESEARCH AND DEVELOPMENT CORPORATION,  
of: 3rd Floor, Industry House, Brisbane Avenue, Australian Capital  
Territory 2600, Australia;

In respect of the inventions disclosed in the patent applications listed in the Schedule  
affixed hereto.

WHEREAS:

1. The ASSIGNOR is the employer and assignee of inventors in respect of the inventions described in the patent applications listed in the Schedule;
2. The ASSIGNEES are desirous of acquiring an interest in, to and under said invention and any Letters Patent to be obtained therefor;
3. This Assignment Witnesses that, in consideration of ONE DOLLAR (\$1.00), the receipt of which is hereby acknowledged, the ASSIGNOR hereby sells, assigns, transfers and sets over to the ASSIGNEES their exclusive right, title and interest to have and to hold, use, exercise and enjoy said inventions and any and all Patent Applications which claim the benefit of priority from any or all of the Patent Applications listed in the Schedule, and any and all Letters Patent to be obtained on any and all of said Patent Applications, and any divisional application, continuation application, renewal, reissue or substitute thereof for the full term or terms for which the same may be granted;
4. The ASSIGNOR hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale;
5. The ASSIGNOR further covenants that the ASSIGNEES will, upon their request, be provided promptly with all pertinent facts and documents relating to said applications, said inventions and said Letters Patent as may be known and accessible to the ASSIGNOR, and will testify as to the same in any interference or litigation related thereto, and will promptly execute and deliver to the ASSIGNEES or their legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain and enforce said applications, said inventions and said Letters Patent which may be necessary or desirable to carry out the purposes hereof at the cost of Agriculture Victoria Services Pty Ltd, or subsequent titleholder as subject to any Agreement thereto

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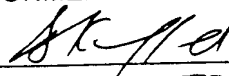
- 2 -


between Agriculture Victoria Services Pty Ltd and said subsequent titleholder.

IN WITNESS WHEREOF, the parties hereto have hereunto executed this Assignment:

**For and on behalf of the ASSIGNOR:**

STATE OF VICTORIA as represented by its  
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT  
by its authorized officer whose signature  
appears opposite hereto:


  
Name: **BRUCE JEFFORD**  
Title: **Executive Director, Pig Research and Development Industries**

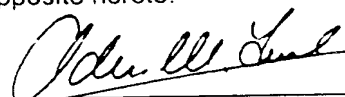
Witness:   
Name: **P. MACKENZIE**  
Title: **RPA**

DATED this 19<sup>th</sup> DAY of NOVEMBER, 1999.

**For and on behalf of the ASSIGNEES:**

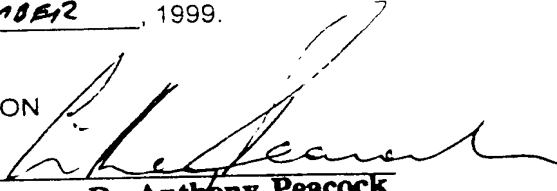
AGRICULTURE VICTORIA SERVICES PTY LTD.  
by its authorized officer whose signature  
appears opposite hereto:

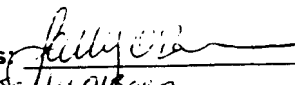
  
Name: **MR BRUCE LANG**  
Title: **COMPANY SECRETARY**

Witness:   
Name: **ADRIAN TRIOLI**  
Title: **MANAGER - INTELLECTUAL PROPERTY AND CONTRACTS**

DATED this 19<sup>th</sup> DAY of NOVEMBER, 1999.

PIG RESEARCH AND DEVELOPMENT CORPORATION  
by its authorized officer whose signature  
appears opposite hereto:

  
Name: **Dr Anthony Peacock**  
Title: **Executive Director**  
**Pig Research and Development Corporation**

Witness:   
Name: **Sally O'Brien**  
Title: **Executive Assistant**

DATED this 23<sup>rd</sup> DAY of November, 1999.

DAVID 48-01 APR

**COPY**  
*Not for Recordation*  
DEVOLUTION OF TITLE DOCUMENTS

**ASSIGNMENT**

**BETWEEN:**

The ASSIGNOR,

of: Catherine WRIGHT, an Australian citizen,  
49/422 Cardigan Street, Carlton, Victoria 3053, Australia;

AND

The ASSIGNEE: STATE OF VICTORIA as represented by its DEPARTMENT OF  
NATURAL RESOURCES AND ENVIRONMENT,  
of: 8 Nicholson Street, East Melbourne, Victoria 3002, Australia;

In respect of the invention disclosed in the United States Patent Application No. 60/133,989 entitled "Novel Lawsonia spp. gene and uses therefor V", which was filed in the United States Patent and Trademark Office on May 13, 1999.

**WHEREAS:**

1. The ASSIGNOR is the co-applicant in respect of the aforesaid patent application;
2. The ASSIGNEE was, at the time the invention was made, the employer of the Assignors; and the ASSIGNEE is desirous of acquiring an interest in, to and under said invention and any Letters Patent to be obtained therefor;
3. This Assignment Witnesses that, in consideration of ONE DOLLAR (\$1.00), the receipt of which is hereby acknowledged, the ASSIGNOR hereby sells, assigns, transfers and sets over to the ASSIGNEE the exclusive right, title and interest to have and to hold, use, exercise and enjoy said invention, and any and all Patent Applications which claim the benefit of priority from said Patent Applications, and any and all Letters Patent to be obtained on any and all of said Patent Applications, and any divisional application, continuation application, renewal, reissue or substitute thereof for the full term or terms for which the same may be granted;
4. The ASSIGNOR hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale;
5. The ASSIGNOR further covenants that the ASSIGNEE will, upon request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent as may be known and accessible to the ASSIGNOR, and will testify as to the same in any interference or litigation related thereto, and will promptly execute and deliver to the ASSIGNEE or its legal representative(s) any and all papers, instruments or affidavits required to apply for, obtain, maintain and enforce said application, said invention and said Letters Patent which may be necessary or desirable to carry out the purposes hereof the cost of the ASSIGNEE or subsequent titleholder.

COPY


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IN WITNESS WHEREOF, the parties hereto have hereunto executed this Assignment:

By the ASSIGNOR:

  
Name: Catherine WRIGHT

Witness:

  
Name: Jim Parsons

Title: BUSINESS DEVELOPMENT MANAGER

DATED this 29<sup>th</sup> DAY of September, 1999.

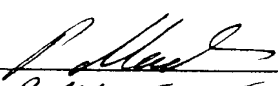
For and on behalf of the ASSIGNEE:

STATE OF VICTORIA as represented by its  
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT  
by its authorized officer whose signature  
appears opposite hereto:

  
Name:

Title: SCOTT STEPHORD  
General Manager of the Department of Natural Resources and Environment

Witness:

  
Name: P. MACKENZIE  
Title: RPA

DATED this 17<sup>th</sup> DAY of NOVEMBER, 1999.